

What is claimed is:

1. A rotary encoder having a housing case provided with a common electrode and a plurality of signal electrodes, and a rotatable sliding contact in 5 relation to the housing case, wherein

the common electrode is formed within a first angular range along a first circumference,

the plurality of signal electrodes are formed within a second angular range along a second circumference of a different radius than the first circumference 10 and have a center point concentrical with the first circumference,

the first angular range is equal to or slightly wider than the second angular range, and

contact points provided on the sliding contact slide regularly on the signal electrodes and the common electrode to produce continuous output of 15 rectangular waves.

2. The rotary encoder according to claim 1, wherein the contact points are provided on equally divided angular positions along the circumference, and the contact points travel and come into contact with the plurality of electrodes in a 20 sequential manner to produce the continuous output of rectangular waves.

3. The rotary encoder according to claim 2, wherein each of the signal electrodes has one contact electrode,

the contact electrode produces a single rectangular wave, and

25 the sliding contact has the same number of contact points as a number of rectangular wave outputs necessary to produce per one full rotary operation.

4. The rotary encoder according to claim 1, wherein the common electrode is disposed to an inner side of the plurality of signal electrodes.

5. The rotary encoder according to claim 4, wherein a leading portion of 5 the common electrode is embedded in the housing case.

6. A rotary encoder comprising:
a housing case;
an operating member disposed to the housing case in a rotatable manner
10 about a predetermined center point on a bottom surface of the housing case;
a common electrode of circular arc shape formed continuously within a first angular range along an area of a first radius from the center point on the bottom surface of the housing case;
a signal electrode formed within a second angular range along an area of a 15 second radius from the center point; and
a sliding contact fixed to an underside surface of the operating member for making a rotary movement on the bottom surface of the housing case, wherein
the signal electrode is disposed to at least two locations with electrical
isolation to each other, and each of the signal electrodes has a contact electrode
20 for making electrical contact with the sliding contact,
the first angular range is slightly larger than the second angular range,
and
the sliding contact has a first contact point for making electrical contact
with the common electrode at the area of the first radius and a plurality of
25 second contact points for making electrical contact with the contact electrodes
at the area of the second radius, and the first contact point and the plurality of
second contact points are disposed to same angular position.

7. The rotary encoder according to claim 6, wherein the sliding contact has at least three combinations of the first contact point and the second contact points.

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8. The rotary encoders according to claim 6, wherein each of the signal electrodes has at least two contact electrodes.

9. The rotary encoder according to claim 6, wherein each of the signal 10 electrodes has one contact electrode, and the sliding contact has the same number of combinations of the first contact point and the second contact points as a desired number of rectangular wave outputs.

10. The rotary encoder according to claim 6, wherein the signal electrode 15 is disposed to at least three locations with electrical isolation to one another, each of the signal electrodes has a contact electrode, and the sliding contact has the same number of combinations of the first contact point and the second contact points as a desired number of rectangular wave outputs.